RP 144
OCTOBER 2004

THE COST OF AID TYING TO GHANA

Dr. Barfour Osei

AFRICAN ECONOMIC RESEARCH CONSORTIUM

CONSORTIUM POUR LA RECHERCHE ECONOMIQUE EN AFRIQUE

The cost of aid tying to Ghana

By

Dr. Barfour Osei
University of Ghana

AERC Research Paper 144
African Economic Research Consortium, Nairobi
October 2004

Published by: The African Economic Research Consortium
P.O. Box 62882-00200
Nairobi, Kenya

Printed by: The Regal Press Kenya, Ltd.
P.O. Box 46166-00100
Nairobi, Kenya

ISBN 9966-944-54-0

Table of contents

List of tables

Acknowledgements

The author is grateful to the African Economic Research Consortium (AERC) for financial support for carrying out this study. The author also wishes to thank resource persons and peers of the AERC biannual research workshop for the their invaluable comments and inputs on initial drafts of the study. However, the author remains solely responsible for the views and shortcomings of the study.

Abstract

This study investigates the prices of tied foreign aid imports by estimating the price differentials between tied aid imports and non-aid imports from bilateral sources to Ghana. The study finds a significant mark-up on the prices of tied aid imports relative to non-aid imports, which translates into substantial cost to Ghana. Several reasons, both in Ghana and in the donor countries, could be found for the estimated price differentials. Ghana needs to take steps to improve its investment climate, as a way of reducing investment risk, which in turn will enhance the confidence of export financiers to reduce the incentive to mark up prices of tied commodities. On the part of donor countries, there may be need to examine the market for the supply of aided commodities towards the liberalization of such markets. It is suggested that although the higher costs on tied imports may be a necessary price Ghana had to pay to obtain aid, the associated cost provides a case for the cancellation of the bilateral aid debt of Ghana.

1. Introduction

The ever-widening gap between the developed and developing countries has become a central issue of our time. The effort to reduce it has over the past four decades produced, among other things, a transfer of financial resources on an unprecedented scale from the "richer" to the "poorer" countries.[1] The fundamental idea of foreign aid was that resources would be transferred to developing countries on concessional terms, that is, on terms and conditions more generous than those on credits obtainable from the world's capital markets. The idea of concessionality is to enable aid patterns to be compatible not just with the aims of growth but with a position of net indebtedness that is tolerable in the long term in the recipient countries.

Be that as it may, international aid for development is today fraught with disillusion and distrust. This is because both donors and recipients alike have been exposed to unending problems. The issue of the quality of aid and its effectiveness in promoting development is at the centre of the debate.[2] This issue has gained wider attention in recent years for many reasons, including the growing indebtedness of developing countries. In sub-Saharan Africa, rising external debt now represents one of the greatest economic problems. In Ghana, for example, external debt service requirements are now a major constraint to both domestic fiscal stability and rapid income growth (see Osei, 1995).

How aid influences development

Much of the "debt overhang" and the wider issue of the influence of aid on the pace and depth of development depend on how the aid is used in the recipient country. For example, if aid finances productive investments with higher rates of domestic and external returns than the cost of borrowing, the debt service requirements should normally be met from the increased future stream of foreign exchange earnings and still leave net benefit for the recipient economy. In many developing countries, however, especially in Africa, where aid finances investments with long gestation periods and/or large indivisibilities with low returns, especially in the early years, the concessionality of aid is crucial to the effectiveness of the assistance in promoting development.

The practice of aid tying by which donors impose restrictions on where the recipient can spend aid funds, and/or end-use restrictions – through the specification of commodities and projects for which external assistance can be used – has long raised concerns about the quality and the effectiveness of aid. These restrictions reduce the degree of competition in the supply of foreign aid goods and services. As the theory of price traditionally dictates,

the smaller the number of competitors, the lower the probability of lower prices and a more efficient allocation of resources. This theory is borne out by a considerable number of empirical studies on market performance, which indicate that monopoly control of markets lead to higher prices.

In effect, restrictions imposed by tying could represent an abuse of market power to extract excessive profit through the higher prices on tied goods and services. For sub-Saharan African countries, already facing external debt problems and the need to make optimal use of limited financial resources, such an abuse of market power by aid donors, which leads to higher prices on tied aid goods and services, could worsen the debt problems and accentuate the aid dependency situation of the region.

It is important to be clear about what is being said here. From both development quality and aid effectiveness perspectives, it is not that tied aid is "bad" and untied aid is "good". What ultimately matters is the degree of competition in the procurement process: tied aid contracts won through a competitive process are likely to meet aid quality objectives, while formally untied aid offers that are *de facto* tied will not. Thus, it is to the extent that tied aid is characterized by a lack of competition in the procurement process that it may impose additional cost on recipient countries and reduce the effectiveness of international assistance.

Thus, the aid-tying practices by donors require careful scrutiny for their possible costs to recipient countries. However, although there is considerable empirical literature on market performance dealing with the selling prices in domestic markets of the major aid donor countries, these analyses have not been extended to a systematic investigation of prices offered for foreign aid goods and services. At the same time, as Morrissey and White (1996: 208) observe, "there are *a priori* reasons to believe that procurement prices under tied aid will be somewhat higher than prices under fully untied aid". This study on Ghana is intended as an effort in the direction of investigating the prices of tied imports.

Purpose of this study

The purpose of the study is to investigate whether bilateral donors to Ghana charge higher prices for aid imports tied to their own source(s). The main objective of the study is to provide the empirical evidence that may be useful in formulating the policy responses to aid tying in the effort to make external aid to Ghana more effective.

The study is divided into four sections. The next section provides background information: in this section we examine the magnitudes, composition and sources of external aid to Ghana. The section also discusses the tying practices of some of the major bilateral donors to Ghana. Section three attempts to estimate the cost of aid tying through an analysis of import prices. The last section is the conclusion.

2. The profile of aid to Ghana: Magnitude, sources and composition

At the start of Ghana's Economic Recovery Programme (ERP) in 1983, a chronic shortage of foreign exchange was a major constraint to the economic recovery. Poor export performance had translated into a large current account deficit on the balance of payment. Imports of essential inputs for the economic recovery were, therefore, severely curtailed. At the same time, since the achievement of a viable balance of payments depended on the ability to import intermediate and capital goods to restructure industry and build new capacity, the economy was in a vicious circle: it could not achieve balance of payments viability because of inability to import, and it could not import because of balance of payment constraints. Over the last decade in spite of some improvement in export performance, the current account deficit on the balance of payments has continued to widen.[3] Consequently, the availability of external assistance on concessional terms has since 1983 been critical for the success of the economic recovery programme. (see, for example, World Bank, 1984, 1989, 1992).

Since the inception of the ERP the external aid map of the country has seen dramatic transformation. Not only has the magnitude of aid in support of the reforms grown, its composition and origin have also shown greater diversity. At the initial stages of the programme (1983–1986), total aid inflows averaged about $200 million a year. This level of inflows represented about 4% of GDP (see Table 1). The level of inflows then rose rapidly to reach about $700 million in 1989 (11% of GDP). The level of inflows rose further to about $900 million (13% of GDP) in 1991. Since then, the average level of annual inflows has remained around $700 million (about 10% of GDP). Indeed, the level of inflows to Ghana since the inception of the ERP has been unprecedented in the country's history.[4]

The importance aid has assumed in Ghana since 1983 is reflected in its relationships in the government's budget. It is apparent from Table 1 that aid inflows have represented an ever-increasing level of the country's imports since 1983. The proportion of aid in total imports more than doubled from 16% in 1983 to 44% in 1989. Since then, this proportion has remained around 30%. Also, over the last decade external aid going into key sectors of the economy has expanded faster than government expenditures to these sectors. Since 1985, for example, external aid has represented an ever-increasing share of government expenditure going into the social and economic sectors of the Ghanaian economy. The ratio of aid to government expenditure in the social sector increased from about 4% in 1984 to 7% in 1988 and increased further to over 20% by 1995.

Table 1: Total disbursed aid to Ghana, 1983–1995

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Total aid ($ million)	114	219	201	355	417	563	714	730	996	745	754	632	509
Analyses:													
Aid as % of GDP	3	4	4	5	6	9	11	11	13	11	11	10	9
Aid as % of imports	16	36	32	37	37	39	44	39	38	36	33	30	23
Aid as % of current account	50	101	125	176	198	193	187	165	132	155	135	239	127
Social sector aid/ Govt expend. in social sector(%)	-	4	4	11	12	7	10	14	37	23	21	23	20
Economic sector aid/ Govt expend. in econ. sector (%)	-	37	68	106	112	35	24	19	65	67	55	68	52

Sources: Bank of Ghana, external aid department.
Bank of Ghana, quarterly digest of statistics, various issues.
Ministry of finance and economic planning, external aid section.
World Bank (1984), Ghana: Policies and programme for adjustment.
World Bank (1991), Ghana: Progress on adjustment.

Similarly, the ratio of aid to government expenditure in the economic sector increased from about 30% to over 50% between 1984 and 1995. These rising ratios have come about as a result of the slow growth and/or proportional decline in government expenditure to these sectors. This situation suggests that external aid is now substituting for productive state expenditures in Ghana. The situation also reflects the aid dependency situation of the Ghanaian economy. As the country's dependence on foreign aid has thus increased, concern is now rife about the sustainability of the reforms, since Ghana cannot expect the higher levels of inflows to continue in future. This concern, while emphasizing the need for making optimal use of available aid resources, also brings to the fore the issue of aid tying, which may impose additional cost on the country, reduce the effectiveness of aid and accentuate the aid-dependency situation.

The types of assistance the country has received since 1983 highlight the potential for aid tying in Ghana. At the early stages of the reforms (1983–1986), the bulk of aid was programme aid/balance of payments support, forming over 50% of the total inflows (see Table 2). Programme aid and balance of payments support suited Ghana's needs for relatively fast-disbursing assistance designed to relieve specific infrastructure and production bottlenecks. During this period multilateral institutions including the World Bank and the UN dominated aid provision (see Table 3). Some of the assistance from these sources was tied. For example, the programme aid from the main multilateral donor, the International Development Association (IDA), was co-financed by several donors some of whom tied their assistance. Other donors also channelled their programme support through foreign exchange auctions in which successful bids were "earmarked" against imports from the donor source(s).

Table 2: Foreign aid to Ghana by type, 1983-1995

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Total aid ($ million)	114	219	201	355	417	563	714	730	996	745	754	632	509
of which (%):													
Investment project aid	19.0	30.0	41.3	29.7	32.1	45.0	38.0	40.5	56.8	54.5	56.4	53.2	50.1
Programme/Balance of payments support	52.0	48.0	48.2	51.6	46.4	34.7	43.6	37.5	28.5	26.8	14.6	18.1	20.6
Free standing technical asst.	10.2	10.1	10.4	14.6	16.4	15.6	12.5	13.6	11.4	17.0	19.4	20.3	18.3
Food aid	-	4.2	5.1	4.1	5.1	4.7	5.9	8.4	3.3	1.7	1.4	1.1	1.6
Emergency relief assistance	-	-	-	-	-	-	0.2	0.1	-	-	-	-	

Note: (1) Includes Investment-related technical assistance.
(2) Includes credit lines to the private sector.
Sources: Same as Table 1.

Aid tying in Ghana has been more prevalent with investment project assistance (IPA). This type of aid formed about 30% of total inflows during the early stages of the reforms (see Table 2), but since 1988 has been a higher component of IPA. The share of this type of aid in total inflows has risen to about 50%. The increased share of investment project assistance has come about as the share of aid from bilateral sources has increased (see Table 3). Aid from bilateral donors has constituted about 50% of the total since 1988. The major bilateral donors include Japan, the United Kingdom, USA, Germany, the Netherlands, Canada and France. These bilateral donors attribute their increasing share in total aid to their desire to be more visible, a development that they relate to "a search for greater influence" in the country. They point out that while they had earlier opted to support the economic reforms with facilities channelled through multilateral agencies, it had lately became important for them to pursue specific project initiatives that yield direct observable impacts (Aryeetey, 1995).

The desire of the major bilateral donors to be more visible with their aid programmes derives in part from commercial pressures on aid, which the OECD (1994) observes, have been growing in many of these countries in recent years.[5] In response to such commercial pressures and also for other reasons, all the major bilateral donors tie their assistance in one form or the other.[6] The United States, for example, uses formal tying restrictions under which it requires recipients to formally and contractually spend aid funds on imports of goods and services only from its own source(s). In order to ensure that these restrictions are not violated, aid is usually disbursed in such a way as to give rise to directly identifiable imports that can be related to a particular source or origin. When aid expenditure is not related to direct identifiable imports, as for example, in the case of the "local cost" component of project aid or "budgetary grants", formal restrictions are also devised in the form of "restricted accounts", under which the recipient is required to spend the aid on specified sources. In addition, there is the requirement that at least 50% of the goods purchased must be transported in US ships, except in cases where this is impossible because of lack of services under the US flag.

Table 3: Foreign aid to Ghana by source, 1983–1995

	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
Total aid ($ million)	114	219	201	355	417	563	714	730	996	745	754	632
of which (%):												
Multilateral	46	56	53	66	69	58	45	58	45	40	51	32
Bilateral	53	43	46	34	30	41	55	41	53	60	48	68
Analyses:												
Major bilateral donors												
Rank:												
1st	Ger	Can	Jap	UK	UK	Jap	UK	Jap	UK	Jap	UK	Jap
2nd	UK	USA	Can	Jap	Jap	UK	Jap	Ger	Ger	UK	USA	USA
3d	Jap	UK	Ger	Ger	Fra	Ger	Ger	Can	Jap	Fra	Ger	UK
4th	USA	Jap	UK	Can	Ger	Can	Can	Neth	Can	Neth	Can	Neth
Major multilateral donors												
Rank:												
1st	IDA	IDA	IDA	IDA	IDA	IDA	IDA	IDA	IDA	IDA	IDA	IDA
2nd	EDF	EDF	AfDF	EDF	AfDF	ERF	EDF	ERF	ERF	EDF	EDF	EDF
3d	WFP	WFP	EDF	WFP	WFP	EDF	WFP	EDF	EDF	AfDF	AfDF	AfDF
4th	Af.DF	AfDF	WFP	AfDF	EDF	AfDF	UNDP	WFP	WFP	UNDP	WFP	WFP

Source: Same as Table 1: OECD, Geographical distribution of financial flow to aid recipients, various issues.

The United Kingdom also influences recipients in an informal manner to spend contracted aid on purchases from its source(s). Many factors contribute to the informal tying practice of the UK. These include the prevalence of traditional trade ties, which secures for the UK an advantage of not competing with alternative suppliers. Another factor is the influence that the UK has through colonial ties.[7] In an attempt to appear flexible in its informal tying practice, the UK usually stipulates that the assistance can be used for expenditures outside of the UK markets only when the prices of UK suppliers are "unreasonably" high. The problem, however, is that the recipient is not given the option to compare UK prices with those of other markets. France uses indirect restrictions to tie some of its assistance. It treats the aid flow as part of an overall trade arrangement. This may take the form of restrictions that require the recipient to spend the aid funds on goods and services from France, while France reciprocally agrees to purchase some goods and services from the recipient on a preferential basis.

In addition, most of the major donor governments tie some assistance through credit guarantees to importers and exporters from their countries. These credit guarantees most commonly include suppliers' credits, which are private export credits guaranteed partly or wholly by some institution in the donor country. The financial support of these institutions for such credits is directly or indirectly linked to an official policy of the donor government. The major export credit insurance organizations include the Export Credits Guarantee Department of the United Kingdom, the Banque Francais du Commerce Exterieur of France, Ausfuhrkredit and Kreiditanstalt fur Wiederaufhan of Germany, and the respective export-import banks of Japan and the United States. All these institutions have been responsible for substantial levels of aid to Ghana since the inception of the ERP.

3. The cost of aid-tying: An analysis of import prices

This section estimates the cost of aid tying to Ghana by examining the distribution of prices of tied aid imports and non-aid imports from bilateral sources to Ghana.[8] The fundamental issue of whether donors charge higher prices for aid imports is addressed in the study by comparing the prices of tied aid imports from bilateral sources with the prices of non-aid imports from these sources to Ghana. In the study, aid is official development assistance (ODA), which by definition includes concessionary loans and grants. Thus, tied aid imports cover commodity imports that are supplied by the donors on account of aid and bear restrictions on where Ghana could spend the aid funds and/or end-use restriction – through the specification of commodities and projects for which the assistance could be used.[9] Non-aid imports are commodity imports paid for by Ghana.

Methodological approach

The first step in the empirical analysis is the compilation of annual data on quantity and value (f.o.b.) of tied aid imports and non-aid imports from bilateral sources to Ghana. The annual data on quantity and value of both tied aid imports and non-aid imports are obtained from the Ghana Statistical Service, which made the special effort to classify some of its data for the purposes of this study. The data are compiled on broad economic categories of the Standard International Trade Classification (SITC) at the five-digit level. The data are analysed in two-year averages in an attempt to smooth out the effects any unrepresentative trade values may have on the annual figures.

The analysis is based on the computation of the unit value as a proxy for the price of imports.[10] The unit value, U, of imports from a bilateral source i is calculated as the total value (*f. o. b.*), V_i over the quantity, Q_i (UN, 1967; Yeats, 1990). The price margin (M_i) for a bilateral source is determined as the ratio of the unit values between aid imports, a, and non-aid imports, g. That is:

$$M_i = \frac{V_{ia} / Q_{ia}}{V_{ig} / Q_{ig}} \qquad (1)$$

An aggregate of the price margins across bilateral sources for each commodity group (M_{iT}) is derived as the weighted average of the individual price margins and the share of

each bilateral source in the total commodity group imports. These are then summed:

$$M_{iT} = \sum \left(\frac{V_{ia}}{Q_{ia}} \right) x \frac{Q_{ig}}{V_{ig}} x \frac{V_{ia}}{V_{Ta}} \tag{2}$$

The measure for the total cost (or benefit) of the price differentials, E_{iT}, is derived as:

$$E_{iT} = \sum (U_{ia} - U_{ig}) x Q_{ia} \tag{3}$$

where U_{ia} and U_{ig} are unit values for aid imports and non-aid imports of the various commodity groups, respectively. The sum of this difference is multiplied by the quantity of aid imports, Q_{ia} to give how much more (or less) Ghana paid for aid imports for each commodity group. These calculations are then summed over all the commodity groups.

Empirical estimates and interpretation

The estimates of unit values, price margins and total costs (and benefits) for all commodities in the various SITC categories are presented in Table 4. The estimates suggest that Ghana has been paying more for tied aid imports than for non-aid imports. Over the 1990–1997 period as a whole, as well as for each of the two-year periods, it is apparent from Table 4 that the unit value of tied aid imports always exceeded that of non-aid imports for all commodities. The aggregates of the price margins show a price ratio of at least 3:1 between tied aid imports and non-aid imports for each of the two-year periods as well as the entire period.

On the other hand, the unweighted price margins between tied aid imports and non-aid imports show a price ratio of about 2:1.[11] This would suggest that the bilateral donors that account for the largest shares in the total commodity imports to Ghana – that is, the major aid donors – are also the high cost sources. This indication is apparent from Appendix Table A1, which shows the empirical estimates of unit values, price margins and total costs for each bilateral source. The estimates indicate that the mark-up on aid imports cuts across many of the bilateral donors. Many of the major bilateral donors account for the highest premium in one commodity group or the other over the periods. Although no single country stands out as having the highest premium on its aid imports, the UK appears with the highest premium in most commodity groups in 1990/91 and 1994/95. The same is the case for Norway in 1992/93 and 1996/97. Other countries with the highest price premiums include Switzerland during 1990/91 and France in 1992/93.

How do our estimates compare with others? For one thing, as indicated earlier, there are rather very limited empirical studies of this kind. Jepma (1991, 1992) indicates that conservative empirical evidence suggests that tied aid prices are 10–15% higher than competitive world prices. A study by Yassin (1991), which focused on eight selected foreign-aided projects in Sudan, estimated that the price of tied commodities was 74% higher than alternative quotations from other sources. These estimate put the Ghanaian

case on the high side. However, attention must be drawn to difference in coverage, between, for example, the *micro* nature of Yassin's study and the *macro* approach adopted in this study. Moreover, given the conclusion of Yeats (1990) that African countries pay more for their imports,[12] it is logical to expect that the price ratio we have obtained could be even higher.

Table 4: Estimates of unit values, price margins and total costs (all commodities)

Commodity group	1990–91 Unit value aid imports (U_d)	Unit value non-aid imports (U_o)	Price margin (unweighted) (M)	Price margin (M_{ip})*	Total cost ($) ($E_{ip}$)**	1992–93 Unit value aid imports ($) ($U_d$)	Unit value no aid imports (U_o)	Price margin (unweighted) (M)
SITC 0	2.9251	2.3075	1.1277	0.9334	-815,269	2.3827	0.5810	4.8567
SITC 1	-	-	-	-	-	3.7168	0.8087	3.3631
SITC 2	1.2917	0.4649	3.0084	3.6967	1,872489	1.1227	0.5959	1.8958
SITC 3	3.3550	1.1974	2.0479	2.7353	214,870	3.2143	1.2145	0.7377
SITC 4	-	-	-	-	-	0.9607	1.3992	0.0221
SITC 5	3.9398	0.9239	2.3539	4.7292	2,760,236	1.0689	0.0499	1.4027
SITC 6	2.1760	0.8023	6.4217	7.2099	2,548,015	1.1553	1.2344	1.4992
SITC 7	8.3729	4.1494	1.7168	2.2331	-10,387,552	9.3681	1.1417	1.6079
SITC 8	1.0281	4.0554	1.9809	6.2810	68,248,827	6.9590	2.5115	2.5936
All commodities	3.2983	1.9901	2.6653	3.9741*	64,441,616**	3.3276	1.998	1.9976

Commodity group	1994–97 Unit value aid imports (U_d)	Unit value aid imports (U_o)	Price margin (unweighted) (M)	Price margin (M_{ip})*	Total cost ($) ($E_{ip}$)**	1996–97 Unit value aid imports ($) ($U_d$)	Unit value non-aid imports($) ($U_o$)	Price margin (unweighted) (M)
SITC 0	6.0717	0.6263	4.0345	6.2021	93,967	6.9440	0.5923	4.4922
SITC 1	0.6778	0.9344	0.4640	0.7873	-3,541	0.7952	0.9273	4.6314
SITC 2	0.7882	0.6447	0.8027	1.2102	-1,028	2.5412	0.6968	0.4214
SITC 3	0.5878	0.5708	1.1006	1.2987	-60,827	2.1338	0.9107	2.1828
SITC 4	1.2039	2.7321	0.7273	0.2148	-52,893	2.0159	1.2103	3.7621
SITC 5	1.5927	0.4289	2.1732	3.7149	776,763	1.2154	1.4631	2.1868
SITC 6	2.5366	0.1530	4.3216	6.2128	6,578,621	2.7669	0.1495	2.2112
SITC 7	10.0362	1.1196	4.2675	6.0080	29,108,284	13.9535	2.3938	3.1625
SITC 8	14.0923	4.7174	1.6656	3.5507	3,878,606	10.9245	5.5032	1.1170
All commodities	4.1764	1.3252	2.1730	3.2444*	40,317,952**	4.8101	1.538	2.6853

Commodity group	1990–97 Unit value aid imports (U_d)	Unit value non-aid imports (U_o)	Price margin (unweighted) (M)	Price margin (M_{ip})	Total cost ($) ($E_{ip}$)
SITC 0	4.5808	1.0269	3.6277	5.6638	325,914
SITC 1	1.7299	0.8901	2.8195	5.5505	-1,625
SITC 2	1.8684	06005	1.5321	1.7365	503,187
SITC 3	2.3227	0.9733	1.5172	1.5852	530,271
SITC 4	1.3935	1.7805	1.5038	1.6713	17,922
SITC 5	1.9542	0.7164	2.0291	3.4506	-594,290
SITC 6	2.1589	0.5848	3.6134	4.5795	1,258,944

The estimated price differentials between tied aid imports and non-aid imports translate into a total cost of at least $350 million, that is, an average cost of at least $40 million per year over the 1990–1997 period (see Table 4). It is important to qualify this estimated cost. Since tied aid imports include grant-financed imports, it is to be expected that the actual cost to Ghana could be reduced. Nevertheless, the significance of the estimated

costs is seen in context. Over the 1990–1997 period, aid imports to Ghana averaged about $80 million per annum. Thus, the estimated annual cost of aid tying of about $40 million is nearly half the annual average cost of aid imports to Ghana. In other words, the level of aid imports could have been one-and-a-half times the level actually experienced if the prices of aid imports had reflected those of non-aid imports. It is thus apparent that the price differentials imply a significant loss of essential imports to Ghana.

Moreover, the estimates in Table 4 indicate that the bulk of the total cost and, by implication, the bulk of the loss of imports are associated with commodities in the SITC categories 6–8. These categories represent the high technology, more sophisticated and dynamic products in international trade; higher levels of such imports are crucial for the long-term development of Ghana. In other words, the loss of such imports delays the long-term development of the country. Furthermore, the estimated cost of tying per annum represents about 10% of the total annual inflows from bilateral sources to Ghana (see Table 3). In other words, bilateral donors to Ghana recoup about a tenth of their total inflows through higher charges on aid imports. In effect, debt repayments on bilateral aid have an element of a subsidy from Ghana to the donor countries.

What explains the observed price differentials? It is quite obvious that conditions in both Ghana and the donor countries are responsible. With regard to Ghana, it is arguable that since it is a poor country it might have purchased lower-priced, poorer-quality goods, given that product and quality differentiation do exist among commodities in the same SITC category. Although any inference on quality differences between aid and non-aid imports is difficult to make, an examination of available data on the commodity composition of imports (see Appendix Table A2) shows no significant differences between the types of aid and non-aid imports. In other words it may be reasonable to reject any argument that Ghana buys different types of commodities from those supplied by aid donors.

On the other hand, the investment climate in Ghana may be a factor behind the observed price differentials. Over the study period there was a sharp rise in the level of aid imports that were directly financed by exporters in the donor countries.[13] When exporters in donor countries finance exports of capital goods to developing countries, the export prices (f.o.b) may reflect the risk of investment in the recipient country. Although the investment climate in Ghana has undergone changes since 1983 to reduce the risks of investments, some concerns still remain that could serve as incentives for export financiers to mark-up export prices. The World Bank (1993), for example, cites the continuance of a cobweb of old controls and regulations, and the lack of transparency in the enforcement of laws and regulations as factors that still cloud the investment climate and increase the risks of investment in Ghana.

In the donor countries it is easy to point at factors in the market for aid goods as contributing to the higher prices of those exports. In each of the donor countries there could be many exporting firms for commodities financed by aid. Therefore, the potential for collusive practices and overpricing must, normally, be expected to be minimal. However, the estimates of higher prices on aid imports suggest that contracts for the supply of such imports are not won on the basis of competitive procedures. The supply of aid imports may be concentrated in a small number of firms in the donor countries,

thereby leading to oligopolistic pricing practices. Or the supply of aid imports entails no competition at all, that is, the so-called "direct negotiation". Either way, the results obtained in this study suggest that the basic subsidy involved in aid from the bilateral sources is being captured by private exporters in the donor countries rather than Ghana for whom it is intended. This would suggest that existing donor actions such as antitrust legislation, and other government agencies officially charged with the protection of consumer interests and the maintenance of competition in the domestic markets of the bilateral donors, are having little restraining effects on the export market covered by foreign aid.

4. Conclusion

This study set out to investigate the prices of tied aid imports to Ghana. The study finds that there is a significant mark-up on the prices of tied aid imports in relation to the prices of non-aid imports. The price differentials translate into a substantial cost to Ghana. It is suggested that domestic factors in Ghana and conditions in the market for the export of aid commodities in the donor countries lay behind the observed price differentials and the associated costs.

As Ghana continues to make increasing use of export credits, it is essential that steps be taken to improve the investment climate in the country. This will reduce the risk of investment in the country, which in turn, will enhance the confidence of export financiers to reduce the incentive for marking up export prices to reflect the higher risk of investment in the country. There is also need for action on the part of bilateral aid donors to liberalize the market for the supply of aid exports in their countries.

Finally, the higher cost of aid imports may be a necessary price Ghana has to pay to receive aid since, arguably, higher cost aid may be better than no aid. At the same time, evidence of higher prices and associated costs on aid imports to Ghana provides a case for the cancellation of the country's aid debt to the bilateral donors.

Notes

1. The history of economic thought on foreign aid is somewhat peculiar. The phenomenal success of the Marshall Plan in the late 1940s and early 1950s led to the belief that similar transfers to developing countries would enable their comparably spectacular transformation. That belief had two intellectual underpinnings (Krueger, 1986). The first was the Harrod–Domar model that extended the Keynesian emphasis on investment to include its capacity-increasing effects. The second was economists' emphasis on physical capital, and the view that shortage of capital largely accounted for the poverty of developing countries. The critical bottleneck to growth was believed to be the shortage of investment, which in most developing countries was low because of low saving rate. Foreign aid could thus play a dual role in the development process: as a supplement to domestic savings on one hand, and on the other hand as a supplement to foreign exchange.

2. For a long time the debate on aid effectiveness has been conducted between committed but critical advocates of aid, and those who have been profoundly convinced, for one reason or another, that aid is not a "good thing". These include those who argue that aid either perpetuates dependency and perverts domestic investment (see, e.g., Hayter, 1971) or that it permits governments to "escape the burdens of their foolish economic policies" (Krauss, 1983). The aid donors and recipients themselves have, by and large, stayed on the sidelines of this debate. They are fairly sure that most of what they do is well done (OECD, 1985). For them, and even more striking in the thinking of earlier major international reviews such as Pearson (1964) and, more recently, Cassen and Associates (1986), the case for aid is self-evident.

3. The current account deficit on the balance of payments increased steadily from about 2% of GDP in 1983 to about 5% during 1985–1988. It rose to about 8% in 1990, and had risen to about 10% by 1993 (see, Bank of Ghana, *Quarterly Digest of Statistics*, various issues). The widening current account deficit in the last decade is explained in part by deterioration in the country's terms of trade. Although the country's export volumes have increased substantially, export values have stagnated. For example, the export volume index (1980 = 100) increased steadily from 84 in 1983 to 176 in 1990. Export values, however, increased by a much smaller proportion: from 66 to 83 over the same period (Osei, 1995). The less than

proportionate increase in export values is due to the decline in the real prices of the country's main commodity exports, cocoa and gold. For example, the index (1980 = 100) of the real cocoa price declined continuously from 113 in 1984 to 35 in 1990. Similarly, the index for gold fell from 63 to 48 over the same period.

4. A number of authors have attempted to provide reasons for the interest donors have shown in Ghana since the inception of the ERP. Martin (1991) and Aryeetey (1995) share the view that the significant growth in aid after 1983 is attributed to the improved adjustment record after the initial reforms. Aryeetey adds that improvement in the Government of Ghana's ability to negotiate for aid is also a contributory reason for the higher levels of inflows. Younger (1992), on the other hand, has suggested that many donors supported the ERP because of the bandwagon effect it created, as all donors wished to be associated with "a potentially good case".

5. Such commercial pressures on aid are, of course, not new. In recent times, however, the economic situation in the donor countries, and the perception that aid is under pressure, have led many to the view that aid budgets can be defended by demonstrating immediate returns to the donor in terms of jobs and exports.The view that tying helps to defend aid budgets, or indeed that it should be used to support exports and jobs in the donor country, may not hold up to scrutiny for a number of reasons. First, it fits uncomfortably with many of the broad orientations that now guide relations between donors and recipients – market based reform programmes including liberalization, competition and deregulation. Second, the view in support of tying represents a basic distortion of the real issues, options and implications involved in the contemporary challenge of development. For example, while the "benefits" to a donor's enterprises from tying aid to domestic procurement may well be tangible and "up front", these are dwarfed by the longer-term benefits that arise from the development of future export markets in recipient countries through more liberal policies. Aid budgets can be justified (rather than defended) in donor countries not only because of the more enduring returns from future export markets but also because they are contributing to sound and sustainable development – and this will be recognized not only by those concerned with aid accountability, but equally by the public at large.

6. In theory, the primary cause of aid tying is balance of payments difficulty (in the case of donors with deficits) and balance of payments protection (where the donor has a surplus). (See, for example, Bhagwati, 1967; Lynn, 1970.) Aid tying is considered to reduce for the donor the loss of real income that would otherwise follow if aid transfer did not give rise to matching demand for exports. In other words, aid tying will ensure aid expenditure by recipient countries in the donor country and prevent a leakage into alternative sources of exports, both of which will help the balance of payments position in the donor country. A similar motivation of reducing the real cost of making a certain financial transfer of resources may also underlie a desire for tying aid to industries in the donor country where there is

excess capacity or already surplus stocks.

The tendency to tie aid may also result from a combination of other factors – economic and political. Some donors may tie aid to specific projects because, according to their experiences, this will probably lead to the most efficient use of resources. Other donors might also feel that by financing conspicuous projects that are easily identifiable in the public mind, they would secure political credibility for their aid programmes both at home and in the recipient country.

7. Some authors have shown that external aid cooperation based on colonial ties is very important in some developing countries. Kleiman (1976), for example, shows that the United Kingdom's aid cooperation with former colonies is about three times the level with other developing countries; for France this level is about eight times, and the level is even higher in the case of Belgian, Italian and Portuguese colonies. Consequently, aid tying resulting from colonial leverage is also more prevalent. Yeats (1990), for example, reports that over the period 1962–1987, twenty former French colonies in Africa paid a price premium on average 20–30% higher than the price other importers paid for iron and steel from France. The losses to the African countries associated with the aid tying totalled about $2 billion. Similarly, former Belgian, British and Portuguese colonies in Africa paid price premiums of 20–30% higher for imports from their former rulers than other importers paid.

8. It is necessary to point out that the cost of aid tying may be evaluated from several other angles, including, for example, examining the concessionality of the aid flow and treating the cost of aid as a reduction in the real value of the assistance.

9. Since grants may involve no repayments, but without suggesting that grants involve no cost to the recipient country, it may be ideal not to include grant-financed imports in the analysis of cost. However, such a disaggregation is not possible because of data constraints.

10. An analysis based on the unit value as a proxy for the actual price may be limited by the fact that differences among products grouped in the same SITC category, or differences in quality, may be reflected as price differences. In a sense, such limitations impose a sense of modesty on any results obtained.

11. At the same time, inferring from Morrissey and White (1996) that based on the OECD's Development Assistance Committee (DAC) norm of a grant element of 86%, tying would have to increase prices by over 600% if the excess prices were to offset the grant element, it may be safe to assume that aid to Ghana from the bilateral sources still incorporated some element of concession.

12. Yeats (1990) estimates a price premium of 20–30% on the imports of only iron and steel products of some African countries from France. The losses to these

countries over the 1962–1987 period totalled approximately $2 billion.

13. Imports that were covered by export credits rose from an annual average of $34 million in 1985–1990 to over $80 million in 1990–1995.

References

Aryeetey, E. 1995.Aid Effectiveness in Ghana. Technical Report, Overseas Development Council, Washington, D.C., and Overseas Development Institute, London.

Bank of Ghana, Quartely Digest of Statistics, various issues.

Bhagwati, J. 1967. "The tying of aid". Report No. UNCTAD, TD/7/Suppl. 4.

Cassen, R and Associates. 1986. *Does Aid Work?* London: Clarendon Press.

Hayter, T. 1971. *Aid and Imperialism.* London: Penguin.

Hayter, T. and C. Watson, 1985. *Aid, Rhetoric and Reality.* London: Pluto Press.

Jepma, C. 1991. *The Untying of Aid.* Paris: Organization for Economic Cooperation and Development (OECD).

Jepma, C. 1992. "EC-Wide Untying". IDE Paper, University of Groningen, Netherlands.

Kleiman, E. 1976. "Trade and the decline of colonialism". *Economic Journal,* 86 (September): 459–479.

Krauss, M.B. 1983. *Development without Aid.* New York: New Press.

Krueger, A.O. 1986. "Aid in the development process". World Bank *Research Observer*, vol. 1(1): .

Lynn, L. 1970. "An empirical analysis of the US foreign economic aid and the US balance of payments: The scope for untying and increasing aid". *Manchester School*, September.

Martin, M. 1991. "Negotiating adjustment and external finance: Ghana and the international community". In D. Rothchild, ed., *The Political Economy of Recovery.* London: Lynne Riener Press.

Morrissey, O. and H. White. 1996. "Evaluating the concessionality of tied aid"., *Manchester School*, vol. LXIV(2): 6–7.

OECD. 1985. *Development Cooperation.* Paris: Organization for Economic Cooperation and Development.

Osei, B. 1995. *Ghana: The Burden of Debt Service Payment under Structural Adjustment.* Research Paper No. 33. African Economic Research Consortium, Nairobi.

Pearson, L. B. , E. Boyle. , R.O.Campus, C.D. Dillon, W. Gull., W.A.Lewis., R. E.Marjoli., and S. Okita. 1969. *Partners in Development: Report of the Commission on International Development.* New York.

World Bank, 1984. Ghana: Policies and Programme for Adjustment. Washington, D.C.

World Bank, 1989. Ghana: Structural Adjustmentfor Growth, Report No. 7515-GH, Wahington, D.C.

World Bank. 1991. Ghana: Medium-Term Agricultural Development Strategy: An Agenda for Sustained Growth and Development. Report No. 8914-GH. Washington, D.C.

World Bank. 1992. Ghana: Progress on Adjustment, Report No. 9475-GH, Wahington D.C.

World Bank. 1993. Ghana 2000 and Beyond; Setting the Stage for Accelerated Growth and Poverty Reduction. Washington, D.C

Ul Haq, M. 1967. "Tied credits: A quantitative analysis". In J. Alder, ed., *Capital Movements in Economic Development.* London: Macmillan for International Economic Association.

UN. 1967. *Supplement to the Statistical Yearbook and the Monthly Bulletin of Statistics.* New York: United Nations.

Yassin, I.H. 1991. "Aid-tying and the real value of foreign assistance: The case of Sudan". *Pakistan Development Review*, 30 (2): 189–206.

Yeats, A. J. 1990. "Do African countries pay more for imports: Yes". *Economic Review*, vol. 4(1), World Bank, Washington, D.C. pages 1–20.

Younger, S. 1992. "Aid and the Dutch disease: Macroeconomic management when everybody loves you". *World Development*, vol. 20(11): pages 1587–1597.

Appendix: Supplementary tables

Table A1: Estimates of unit values, price margins and costs (commodity groups and bilateral sources)

	1990–91					1992–93					
	Ua	*Ug*	*MiT*	*EiT*		*Ua*	*Ug*	*MiT*	*EiT*		*Ua*
SITC 0	**2.9252**	**2.3076**	**0.9334**	**-815269.85**	**SITC 0**	**2.3827**	**0.5817**	**7.8773**	**1930720.52**	**SITC 0**	**6.0717**
Italy	12.9811	16.7841	0.5988	-1205561.66	United States	3.1202	0.5823	0.4844	172844.75	United Kingdom*	6.5208
United Kingdom	0.8000	0.5398	0.3346	390291.81	United Kingdom	3.1872	0.4943	0.1860	57297.18	United States	0.9727
					Netherlands	4.6136	0.7101	0.0196	6010.56		
					Italy	1.2087	0.8202	0.0578	29637.22		
					Belgium	0.3252	0.5095	0.0150	-31325.55		
					Australia*	2.9504	0.3380	7.1144	1696256.35		
					SITC 1	**3.7169**	**0.8087**	**6.2437**	**3440.37**	**SITC 1**	**0.6779**
					United Kingdom*	27.2667	0.7422	3.1708	397.87	Netherlands	0.6785
					Netherlands	3.4365	1.0218	3.0729	3042.51	United Kingdom*	0.1364
SITC 2	**1.2917**	**0.4649**	**3.6967**	**1872489.18**	**SITC 2**	**1.1226**	**0.5959**	**1.2478**	**150546.19**	**SITC 2**	**0.7883**
Australia	1.5188	2.0284	0.0062	-8154.48	United States	0.7732	0.4790	0.0021	604.73	Germany*	1.4583
United Kingdom*	4.8289	0.7512	2.3991	929734.81	United Kingdom	1.1960	1.0117	1.1226	180594.64	Italy	0.2365
United States	0.8946	0.4285	1.2915	950908.85	Netherlands	0.2116	0.7542	0.0048	-54266.79	United States	0.3949
					Italy	1.6435	0.8339	0.0030	930.97		
					Germany*	3.3753	0.8336	0.1141	26179.72		
					France	2.5313	0.6757	0.0002	59.38		
					Australia	0.4476	1.0471	0.0009	-3555.46		
SITC 3	**3.3551**	**1.1975**	**2.7354**	**214870.75**	**SITC 3**	**3.2144**	**0.2145**	**93.1487**	**-34047.52**	**SITC 3**	**0.5879**
Australia	3.6458	2.8421	0.0651	3857.83	United States	10.3255	0.1615	5.6615	20013.04	Belgium	0.3427
United Kingdom*	3.3408	1.1876	2.6703	211012.92	United Kingdom	5.0564	0.4281	4.9599	88262.20	United Kingdom*	1.0895
					Australia	0.9556	8.3077	0.0013	-19520.01		
					Belgium	0.0940	1.3127	0.0001	-5850.07		
					Canada	0.5171	3.3834	0.0117	-97454.36		
					France*	29.7500	0.2150	0.7172	1181.40		

continued

Table A1: *continued*

	1990–91					1992–93					
	Ua	*Ug*	*MiT*	*EiT*		*Ua*	*Ug*	*MiT*	*EiT*		*Ua*
					Germany	71.6177	0.3273	81.7526	85405.87		
					Italy	0.4832	0.2500	0.0287	1648.31		
					Netherlands	2.6680	1.0465	0.0148	810.74		
					Sweden	4.1704	12.1821	0.0008	-1081.59		
					SITC 4	**0.9608**	**1.3992**	**0.0000**	**-106306.18**	**SITC 4**	**1.2040**
					Sweden	0.9485				Japan	1.1955
					United Kingdom	1.2732	1.3992	0.0457	-1156.89	United States*	3.3333
SITC 5	**3.9399**	**0.9239**	**4.7292**	**2760236.58**	**SITC**	**1.0689**	**0.4985**	**1.5483**	**-4557743.45**	**SITC 5**	**1.5928**

Table A2: Commodity composition of aid imports and non-aid imports, 1995–1997

1995 Non-aid imports	Aid imports
SITC 5	**SITC 5**
Organic chemicals	Beauty, make-up, skin care
Inorganic chemicals	Personal deodorants and anti-perspirants
Dyeing, tanning and colouring material	Radioactive elements/isotopes and their compounds
Medical and pharmaceutical products	
Essential oils, perfume materials; toilet cleaning preparations	
Fertilizers	
Plastics in primary forms	
Plastic in non-primary forms	
Chemical materials and products	
SITC 6	**SITC 6**
Leather, leather manufactures and dressed furskins	Handkerchiefs, cleansing tissues, towels, etc.
Rubber manufactures	Other articles of paper pulp, paper, paperboard, cellulose wadding
Cork and wood manufactures (excl. furniture)	
Paper, paperboard, and articles of paper pulp, paper or paperboard	
Textile yarn, fabrics, made-up articles and related products	
Non-metallic mineral manufactures	
Iron and steel	
Non-ferrous metals	
Manufactures of metals	

continued

Table A2: *continued*

1995 Non-aid imports	Aid imports
SITC 7	**SITC 7**
Power generation machinery and equipment	Compression-ignition engines (diesel or semi-diesel engines)
Machinery specialized for particular industries	Motor vehicles for the transport of persons
Metal working machinery	Motor vehicles for the transport of goods
General industrial machinery and equipment, machine parts	
Office machines and automatic data processing machines	
Telecommunications and sound recording/reproducing apparatus	
Electrical machinery, apparatus and appliances	
Road vehicles (including air-cushion vehicles)	
Other transport equipment	
SITC 8	**SITC 8**
Prefabricated buildings; sanitary, plumbing, etc. fixing and fittings	Books, brochures and similar printed matter, not in single sheets
Furniture and parts thereof; bedding, mattresses, etc.	Footwear with outer soles and uppers of rubber or plastics
Travel goods, handbags and similar containers	
Articles of apparel and clothing accessories	
Footwear	
Professional, scientific and controlling instruments and apparatus	
Photographic apparatus, equipment and supplies and optical goods; watches	
Miscellaneous manufactured articles	

Sourec: Ghana Statistical Service.

Other recent publications in the AERC Research Papers Series:

The Behaviour of Income Velocity in Tanzania 1967–1994, by Michael O.A. Ndanshau, Research Paper 50.

Consequences and Limitations of Recent Fiscal Policy in Côte d'Ivoire, by Kouassy Oussou and Bohoun Bouabre, Research Paper 51.

Effects of Inflation on Ivorian Fiscal Variables: An Econometric Investigation, by Eugene Kouassi, Research Paper 52.

European Economic Integration and the Franc Zone: The Future of the CFA Franc after 1999, Part II, by Allechi M'Bet and Niamkey A. Madeleine, Research Paper 53.

Exchange Rate Policy and Economic Reform in Ethiopia, by Asmerom Kidane, Research Paper 54.

The Nigerian Foreign Exchange Market: Possibilities for Convergence in Exchange Rates, by P. Kassey Garba, Research Paper 55.

Mobilizing Domestic Resources for Economic Development in Nigeria: The Role of the Capital Market, by Fidelis O. Ogwumike and Davidson A. Omole, Research Paper 56.

Policy Modelling in Agriculture: Testing the Response of Agriculture to Adjustment Policies in Nigeria, by Mike Kwanashie, Abdul-Ganiyu Garba and Isaac Ajilima, Research Paper 57.

Price and Exchange Rate Dynamics in Kenya: An Empirical Investigation (1970–1993), by Njuguna S. Ndung'u, Research Paper 58.

Exchange Rate Policy and Inflation: The Case of Uganda, by Barbara Mbire, Research Paper 59.

Institutional, Traditional and Asset Pricing Characteristics of African Emerging Capital Markets, by Ino L. Inanga and Chidozie Emenuga, Research Paper 60.

Foreign Aid and Economic Performance in Tanzania, by Timothy S. Nyoni, Research Paper 61.

Public Spending, Taxation and Deficits: What Is the Tanzanian Evidence? by Nehemiah Osoro, Research Paper 62.

Adjustment Programmes and Agricultural Incentives in Sudan: A Comparative Study, by Nasredin A. Hag Elamin and Elsheikh M. El Mak, Research Paper 63.

Intra-industry Trade between Members of the PTA/COMESA Regional Trading Arrangement, by Flora Mndeme Musonda, Research Paper 64.

Fiscal Operations, Money Supply and Inflation in Tanzania, by A.A.L. Kilindo, Research Paper 65.

Growth and Foreign Debt: The Ugandan Experience, by Barbara Mbire, Research Paper 66.

Productivity of the Nigerian Tax System: 1970–1990, by Ademola Ariyo, Research Paper 67.

Potentials for Diversifying Nigeria's Non-oil Exports to Non-Traditional Markets, by A. Osuntogun, C.C. Edordu and B.O. Oramah, Research Paper 68.

Empirical Studies of Nigeria's Foreign Exchange Parallel Market II: Speculative Efficiency and Noisy Trading, by Melvin Ayogu, Research Paper 69.

Effects of Budget Deficits on the Current Account Balance in Nigeria: A Simulation Exercise, by Festus O. Egwaikhide, Research Paper 70.

Bank Performance and Supervision in Nigeria: Analysing the Transition to a Deregulated Economy, by O.O. Sobodu and P.O. Akiode, Research Paper 71.

Financial Sector Reforms and Interest Rate Liberalization: The Kenya Experience, by R.W. Ngugi and J.W. Kabubo, Research Paper 72.

Local Government Fiscal Operations in Nigeria, by Akpan H. Ekpo and John E.U. Ndebbio, Research Paper 73.

Tax Reform and Revenue Productivity in Ghana, by Newman Kwadwo Kusi, Research Paper 74.

Fiscal and Monetary Burden of Tanzania's Corporate Bodies: The Case of Public Enterprises, by H.P.B. Moshi, Research Paper 75.

Analysis of Factors Affecting the Development of an Emerging Capital Market: The Case of the Ghana Stock Market, by Kofi A. Osei, Research Paper 76.

Ghana: Monetary Targeting and Economic Development, by Cletus K. Dordunoo and Alex Donkor, Research Paper 77.

The Nigerian Economy: Response of Agriculture to Adjustment Policies, by Mike Kwanashie, Isaac Ajilima and Abdul-Ganiyu Garba, Research Paper 78.

Agricultural Credit Under Economic Liberalization and Islamization in Sudan, by Adam B. Elhiraika and Sayed A. Ahmed, Research Paper 79.

Study of Data Collection Procedures, by Ademola Ariyo and Adebisi Adeniran, Research Paper 80.

Tax Reform and Tax Yield in Malawi, by C. Chipeta, Research Paper 81.

Real Exchange Rate Movements and Export Growth: Nigeria, 1960–1990, by Oluremi Ogun, Research Paper 82.

Macroeconomic Implications of Demographic Changes in Kenya, by Gabriel N. Kirori and Jamshed Ali, Research Paper 83.

An Empirical Evaluation of Trade Potential in the Economic Community of West African States, by E. Olawale Ogunkola, Research Paper 84.

Cameroon's Fiscal Policy and Economic Growth, by Aloysius Ajab Amin, Research Paper 85.

Economic Liberalization and Privatization of Agricultural Marketing and Input Supply in Tanzania: A Case Study of Cashewnuts, by Ngila Mwase, Research Paper 86.

Price, Exchange Rate Volatility and Nigeria's Agricultural Trade Flows: A Dynamic Analysis, by A.A. Adubi and F. Okunmadewa, Research Paper 87.

The Impact of Interest Rate Liberalization on the Corporate Financing Strategies of Quoted Companies in Nigeria, by Davidson A. Omole and Gabriel O. Falokun, Research Paper 88.

The Impact of Government Policy on Macroeconomic Variables, by H.P.B. Moshi and A.A.L. Kilindo, Research Paper 89.

External Debt and Economic Growth in Sub-Saharan African Countries: An Econometric Study, by Milton A. Iyoha, Research Paper 90.

Determinants of Imports in Nigeria: A Dynamic Specification, by Festus O. Egwaikhide, Research Paper 91.

Macroeconomic Effects of VAT in Nigeria: A Computable General Equilibrium Analysis, by Prof. D. Olu Ajaka iye, Research Paper 92.

Exchange Rate Policy and Price Determination in Botswana, by Jacob K. Atta, Keith R. Jefferis, Ita Mannathoko and Pelani Siwawa-Ndai, Research Paper 93.

Monetary and Exchange Rate Policy in Kenya, by Njuguna S. Ndung'u, Research Paper 94.

Health Seeking Behaviour in the Reform Process for Rural Households: The Case of Mwea Division, Kirinyaga District, Kenya, by Rose Ngugi, Research Paper 95.

Trade Liberalization and Economic Performance of Cameroon and Gabon, by Ernest Bamou, Research Paper 97.

Quality Jobs or Mass Employment, by Kwabia Boateng, Research Paper 98.

Real Exchange Rate Price and Agricultural Supply Response in Ethiopia: The Case of Perennial Crops, by Asmerom Kidane, Research Paper 99.

Determinants of Private Investment Behaviour in Ghana, by Yaw Asante, Research Paper 100.

An Analysis of the Implementation and Stability of Nigerian Agricultural Policies, 1970–1993, by P. Kassey Garba, Research Paper 101.

Poverty, Growth and Inequality in Nigeria: A Case Study, by Ben E. Aigbokhan, Research Paper 102.

Effect of Export Earnings Fluctuations on Capital Formation, by Godwin Akpokodje, Research Paper 103.

Nigeria: Towards an Optimal Macroeconomic Management of Public Capital, by Melvin D. Ayogu, Research Paper 104.

International Stock Market Linkages in South Africa, by K.R.. Jefferies, C.C. Okeahalam and T.T. Matome, Research Paper 105.

An Empirical Analysis of Interest Rate Spread in Kenya, by Rose W. Ngugi, Research Paper 106

The Parallel Foreign Exchange Market and Macroeconomic Perfromance in Ethiopia, by Derrese Degefa, Reseach Paper 107.

Market Structure, Liberalization and Performance in the Malawi Banking Industry, by Ephraim W. Chirwa, Research Paper 108.

Liberalization of the Foreign Exchange Market in Kenya and the Short-Term Capital Flows Problem, by Njuguna S. Ndung'u, Research Paper 109.

External Aid Inflows and the Real Exchange Rate in Ghana, by Harry A. Sackey, Research Paper 110.

Formal and Informal Intitutions 'Lending Policies and Access to Credit by Small-Scale Enterprises in Kenya: An Empirical Assessment, by Rosemary Atieno, Research Paper 111.

Financial Sector Reform Macroeconomic Instability and the Order of Economic Liberalization: The Evidence from Nigeria, by Sylvanus I. Ikhinda and Abayomi A. Alawode, Research Paper 112.

The Second Economy and Tax Yield in Malawi, by C. Chipeta, Research Paper 113.

Promoting Export Diversification in Cameroon: Toward Which Products? by Lydie T. Bamou, Research Paper 114.

Asset Pricing and Information Efficiency of the Ghana Stock Market, by Kofi A. Osei, Research Paper 115.

An Examination of the Sources of Economic Growth in Cameroon, by Aloysius Ajab Amin, Research Paper 116.

Trade Liberalization and Technology Acquisition in the Manufacturing Sector: Evidence from Nigeria, by Ayonrinde Folasade, Research Paper 117.

Total Factor Productivity in Kenya: The Links with Trade Policy, by Joseph Onjala, Research Paper 118.

Kenya Airways: A Case Study of Privatization, by Samuel Oyieke, Research Paper 119.

Determinants of Agricultural Exports: The Case of Cameroon, by Daniel Gbetnkon and Sunday A. Khan, Research Paper 120.

Determinants of Regional Poverty in Uganda, by Francis Okurut, Jonathan Odwee and Asaf Adebua, Research Paper 122

Exchange Rate Policy and the Parallel Market for Foreign Currency in Burundi, by Janvier D. Nkurunziza, Research Paper 123.

Structural Adjustment, Poverty and Economic Growth: An Analysis for Kenya, by Jane Kabubo-Mariara and Tabitha W. Kiriti, Research Paper 124.

Liberalization and Implicit Government Finances in Sierra Leone, by Victor A.B. Davis, Research Paper 125.

Productivity, Market Structure and Trade Liberalization in Nigeria, by Adeola F. Adenikinju and Louis N. Chete, Research Paper 126.

Productivity Growth in Nigerian Manufacturing and Its Correlation to Trade Policy Regimes/Indexes (1962–1985), by Louis N. Chete and Adeola F. Adenikinju, Research Paper 127.

Financial Liberalization and Its Implications for the Domestic Financial System: The Case of Uganda, by Louis A. Kasekende and Michael Atingi-Ego, Research Paper 128.

Public Enterprise Reform in Nigeria:Evidence from the Telecommunications Industry, by Afeikhena Jerome, Research Paper 129.

Food Security and Child Nutrition Status among Urban Poor Households in Uganda: Implications for Poverty Alleviation, by Sarah Nakabo-Sswanyana, Research Paper 130.

Tax Reforms and Revenue Mobilization in Kenya, by Moses Kinyanjui Muriithi and Eliud Dismas Moyi, Research Paper 131.

Wage Determination and the Gender Wage Gap in Kenya: Any Evidence of Gender Discrimination? by Jane Kabubo-Mariara, Research Paper 132.

Trade Reform and Efficiency in Cameroon's Manufacturing Industries, by Ousmanou Njika, Research Paper 133.

Efficiency of Microenterprise in the Nigerian Economy, by Igbekele A. Ajibefun and Adebiyi G. Daramola, Research Paper 134.

The Impact of Foreign Aid on Public Expenditure: The Case of Kenya, by James Njeru, Research Paper 135.

The Effects of Trade Liberalization on Productive Efficiency: Electrical Industry in Cameroon, by Ousmanou Njikam, Research Paper 136.

How Tied Aid Affects the Cost of Aid-Funded Projects in Ghana, by Barfour Osei, Research Paper 137.

Exchange Rate Regimes and Inflation in Tanzania, by Longinus Rutasitara, Research Paper 138.

Private Returns to Higher Education in Nigeria, by O.B.Okuwa, Research Paper 139.

Uganda's Equilibrium Real Exchange Rate and Its Implications for Non-Traditional Export Performance, by Michael Atingi-Ego and Rachel Kaggwa Sebudde, Research Paper 140.

Dynamic Inter-Links among the Exchange Rate, Price Level and Terms of Trade in a Managed Floating Exchange Rate System: The Case of Ghana, by Vijay K. Bhasin, Research Paper 141.

Financial Deepening, Economic Growth and Development: Evidence from Selected Sub-Saharan African Countries, by John E. Udo Ndebbio, Research Paper 142.

The Determinants of Inflation in South Africa: An Econometric Analysis, by Oludele A. Akinboade, Franz K. Siebrits and Elizabeth W. Niedermeier, Research Paper 143

AFRICAN ECONOMIC RESEARCH CONSORTIUM

P.O. BOX 62882 - 00200
NAIROBI, KENYA

TELEPHONE (254-20) 2734150
2734153 2734157 2734163
2734166 2734179

FAX (254-20) 2734170 2734173

E-MAIL:
communications@aercafrica.org

WEB SITE:
http://www.aercafrica.org

The principal objective of the African Economic Research Consortium (AERC), established in August 1988, is to strengthen local capacity for conducting independent, rigorous inquiry into problems pertinent to the management of economies in sub-Saharan Africa.

In response to special needs of the region, AERC has adopted a flexible approach to improve the technical skills of local researchers, allow for regional determination of research priorities, strengthen national institutions concerned with economic policy research, and facilitate closer ties between researchers and policy makers.

Since its establishment, AERC has been supported by private foundations, bilateral aid agencies and international organizations.

SPECIAL PAPERS contain the findings of commissioned studies in furtherance of AERC's programmes for research, training and capacity building.

RESEARCH PAPERS contain the edited and externally reviewed results of research financed by the AERC.

It is AERC's policy that authors of Special and Research papers are free to use material contained therein in other publications. Views expressed in such papers are those of the authors alone and should not be attributed to the AERC's sponsoring Members, Programme Committee, or Secretariat.

Further information concerning the AERC, and additional copies of Special and Research Papers, can be obtained by writing to: African Economic Research Consortium, P.O. Box 62882 - 00200, Nairobi, Kenya.

ISBN 9966-944-54-0